

FIG.

1

✓

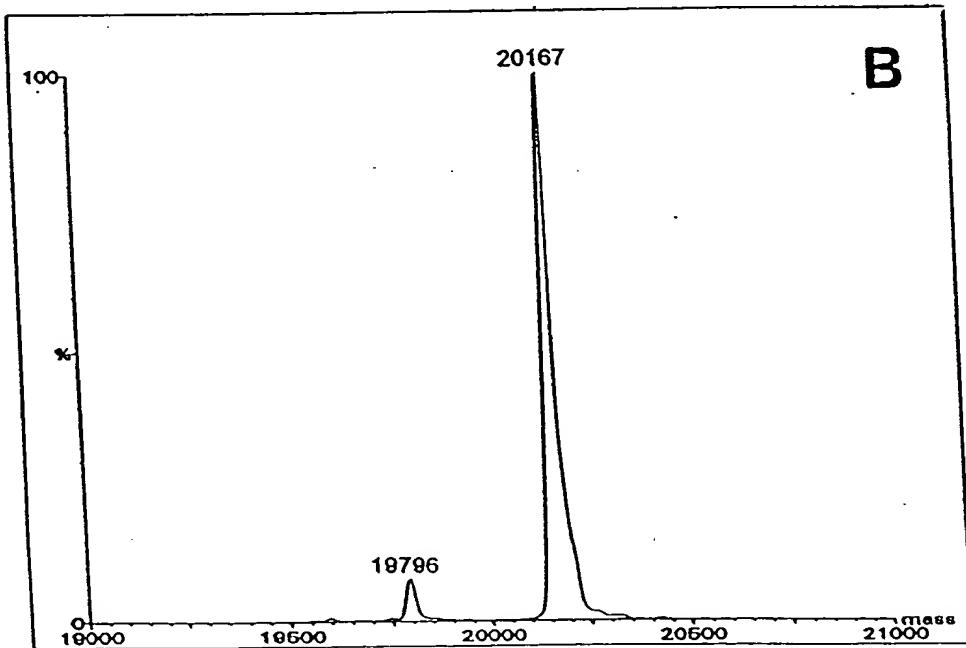
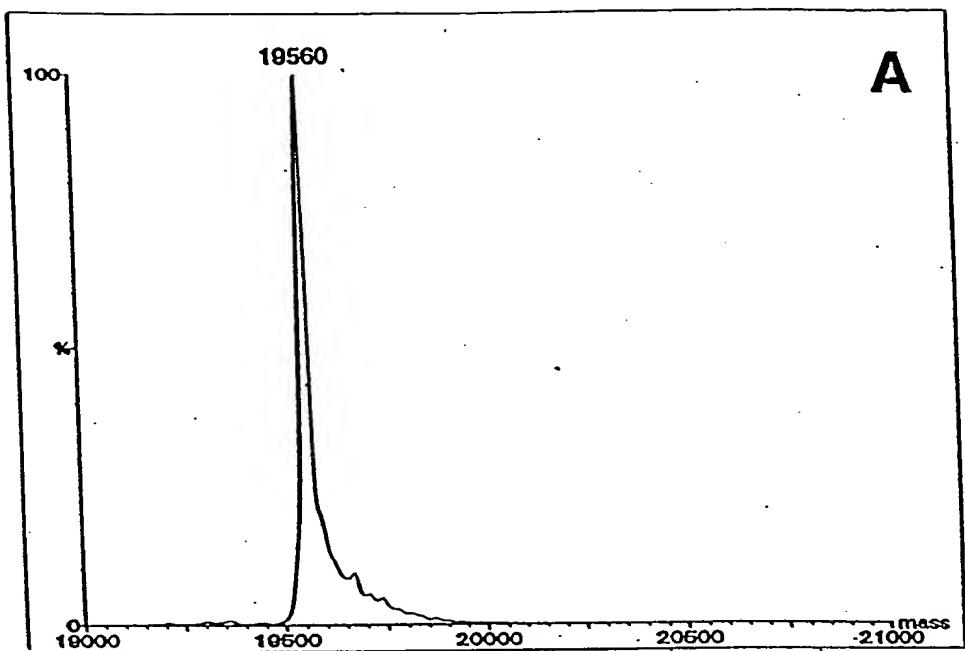


FIG
2

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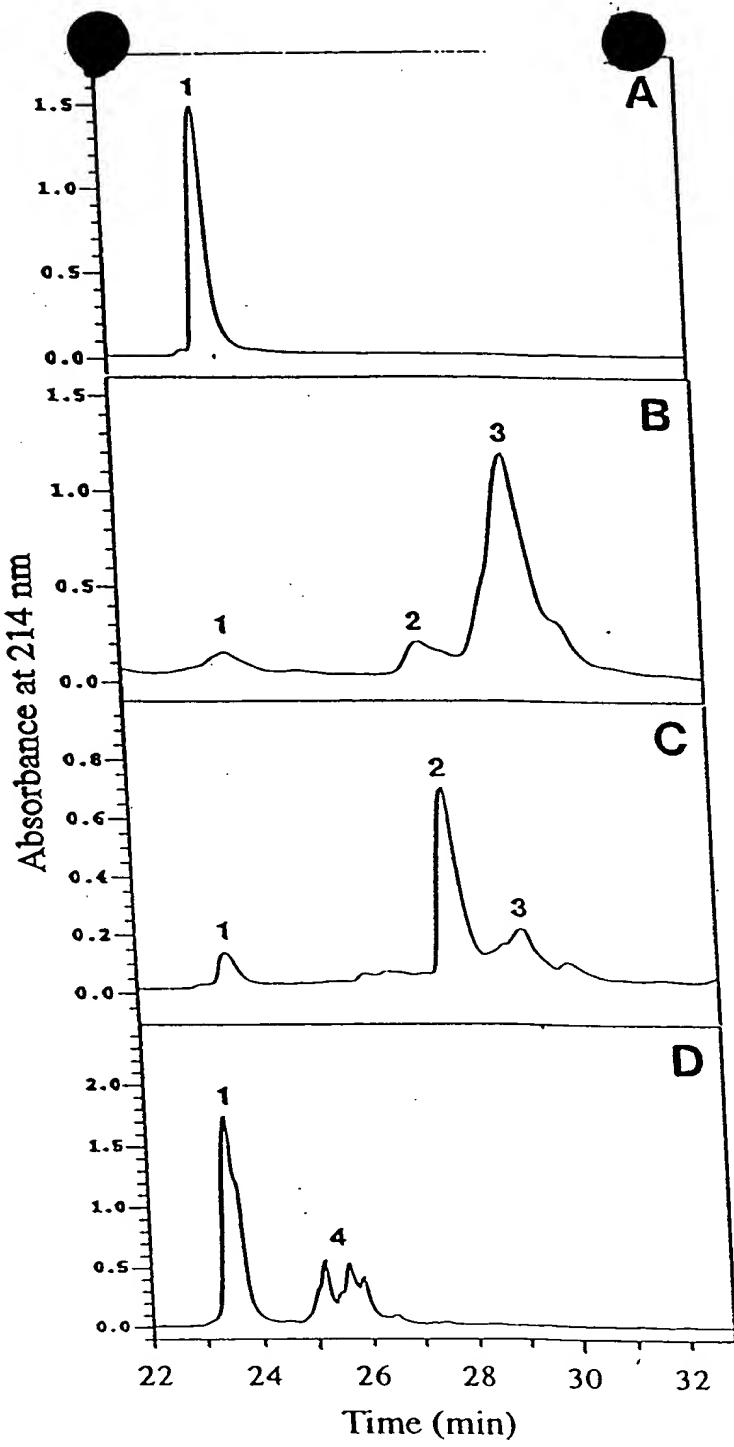


Fig. 3

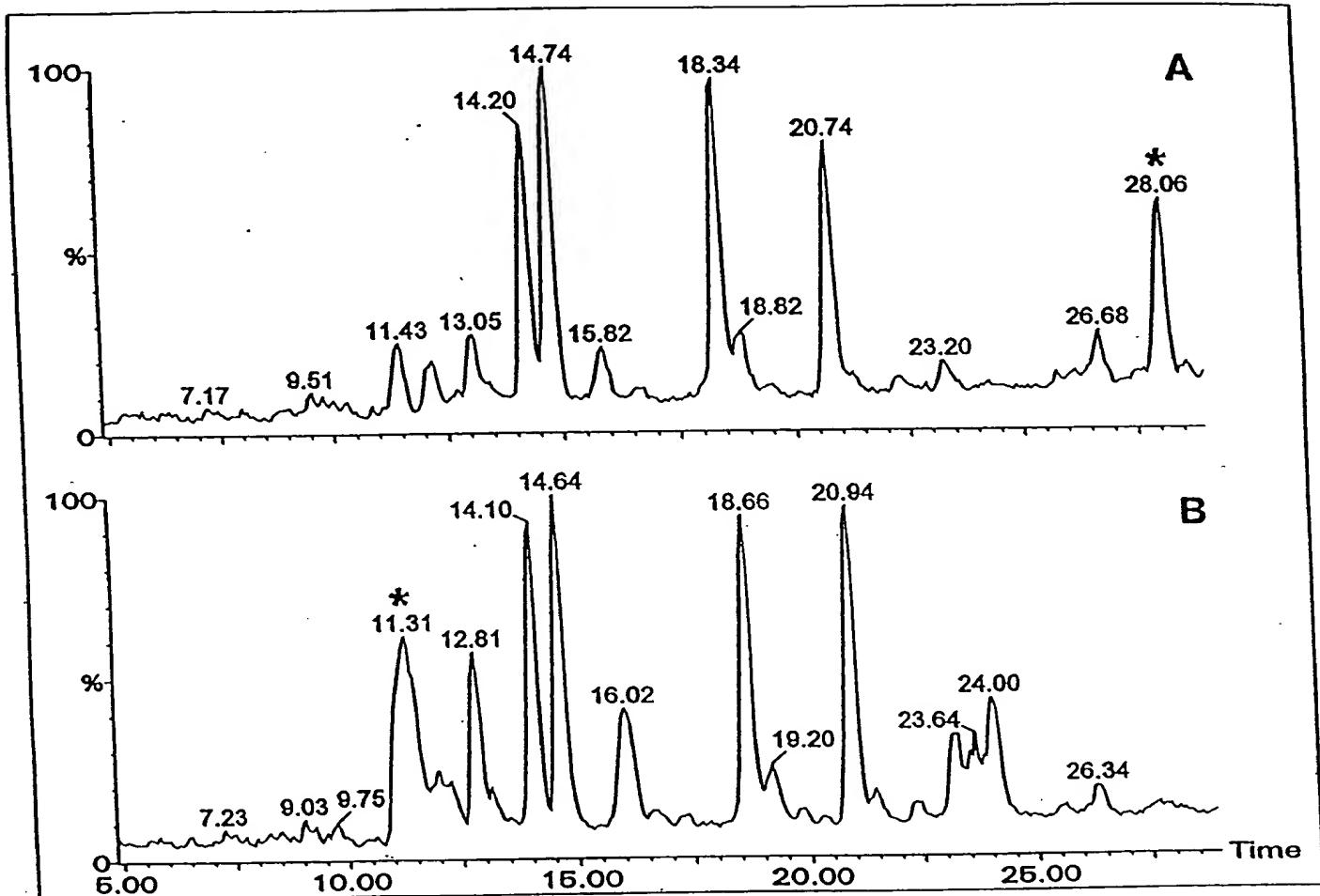


FIG. 4

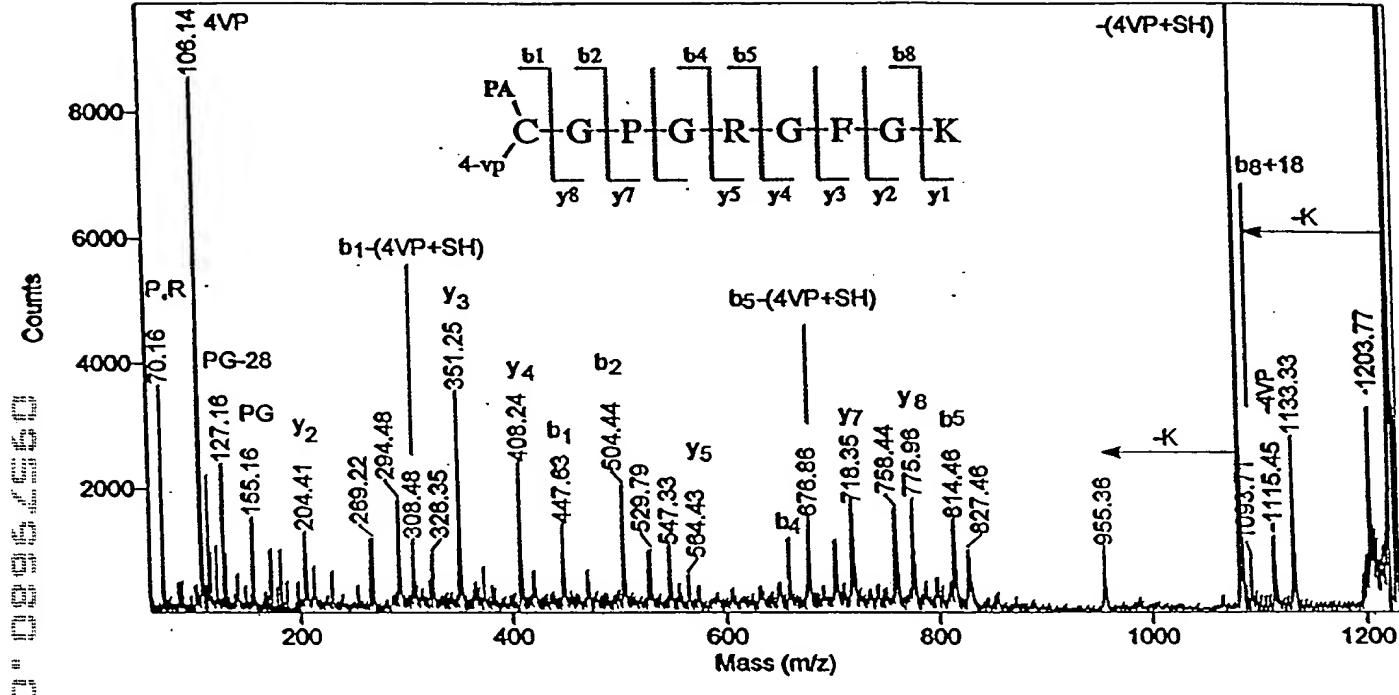


Fig.

5

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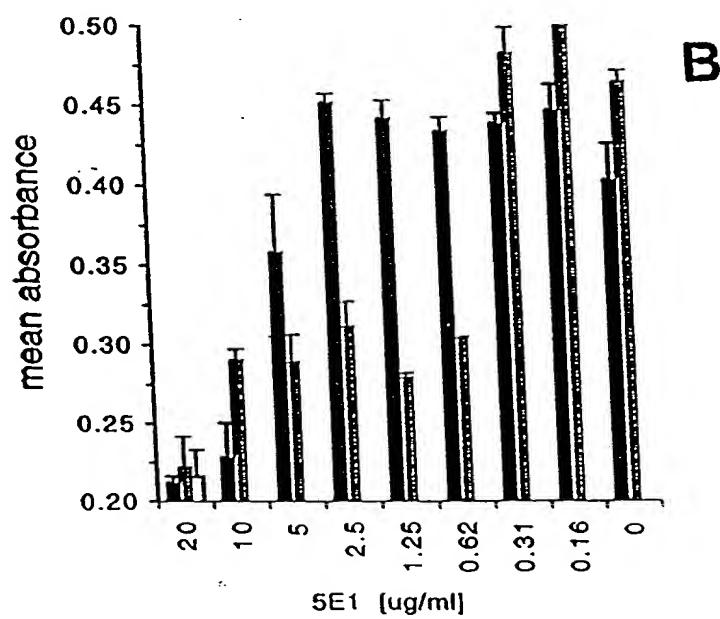
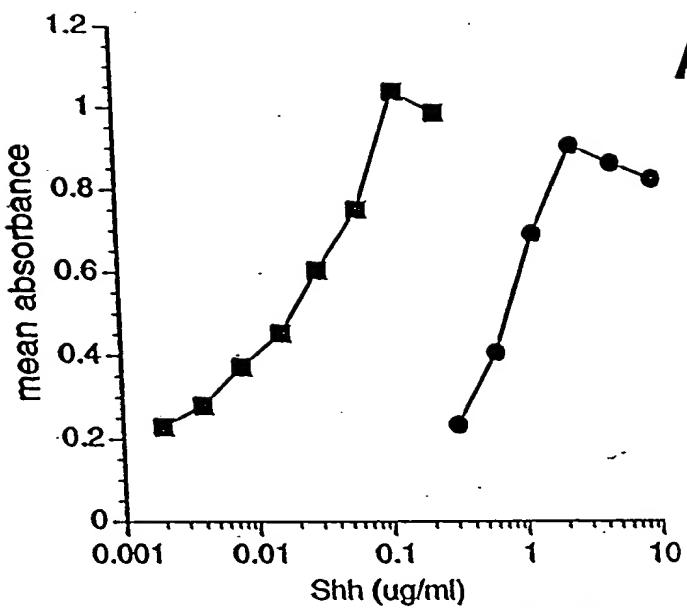


Fig. 6

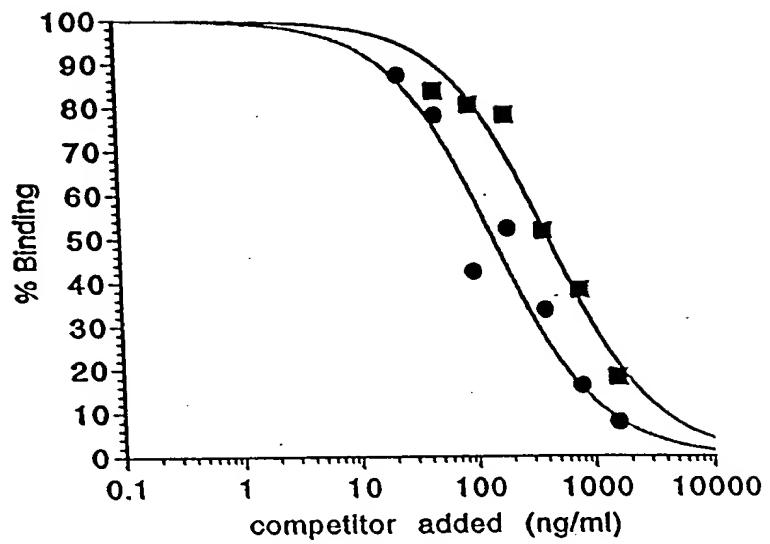


FIG-7

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Figure 8: Alignment of N-terminal fragments of Human Hedgehog Proteins

1	50				
Indian	CGPGRVVGSK	RRPPRK-LVP	LAYKQFSPNV	PEKTLGASGR	YEGKIARSSE
Sonic	CGPGRGFG-K	RRHPKK-LTP	LAYKQFIPNV	AEKTLGASGR	YEGKISRNE
Desert	CGPGRGPVGR	RRYARKQLVP	LLYKQFVPGV	PERTLGASGP	AEGRVARGSE
51	100				
Indian	RFKELTPN _Y N	PDIIFKDEEN	TGADRLMTQR	CKDRLNSLAI	SVMNQWPGVK
Sonic	RFKELTPN _Y N	PDIIFKDEEN	TGADRLMTQR	CKDKLNALAI	SVMNQWPGVK
Desert	RFRDLVPN _Y N	PDIIFKDEEN	SGADRLMTER	CKERVNALAI	AVMNWPGVR
101	150				
Indian	LRVTEGWDED	GHHSEESLHY	EGRAVDITTS	DRDRNKYGLL	ARLAVEAGFD
Sonic	LRVTEGWDED	GHHSEESLHY	EGRAVDITTS	DRDRSKYGML	ARLAVEAGFD
Desert	LRVTEGWDED	GHHAQDSLHY	EGRALDITTS	DRDRNKYGLL	ARLAVEAGFD
151	176				
Indian	WVYYESKAHV	HCSVKSEHSA	AAKTGG	SEQ ID NO: 1	
Sonic	WVYYESKAHI	HCSVKAENSV	AAKSGG	SEQ ID NO. 2	
Desert	WVYYESRNHV	HCSVKADNSL	AVRAGG	SEQ ID NO. 3	

Gap(s), indicated by -, added to facilitate alignment

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

FIGURE 7: CONSERVED SEQUENCE OF N-TERMINAL FRAGMENTS
SEQ ID NO. 4

1 CGPGR_{x1 x2 x3 x4 x5} R_{x6 x7 x8} K_{x9} L_{x10} P L_{x11} YKQF_{x12} P_{x13} V EKTLGASGR 40

80 x₁₅ EGK_{x16 x17} R_{x18} SE RFK_{x19} L_{x20} PNYN PDIIFKDEEN x₂₁ GADRLMT_{x22} R

120 CK_{x23 x24} x₂₅ NSLAI x₂₆ VMN_{x27} WPGVK LRVTEGWDED GHH_{x28 x29 x30} SLHY

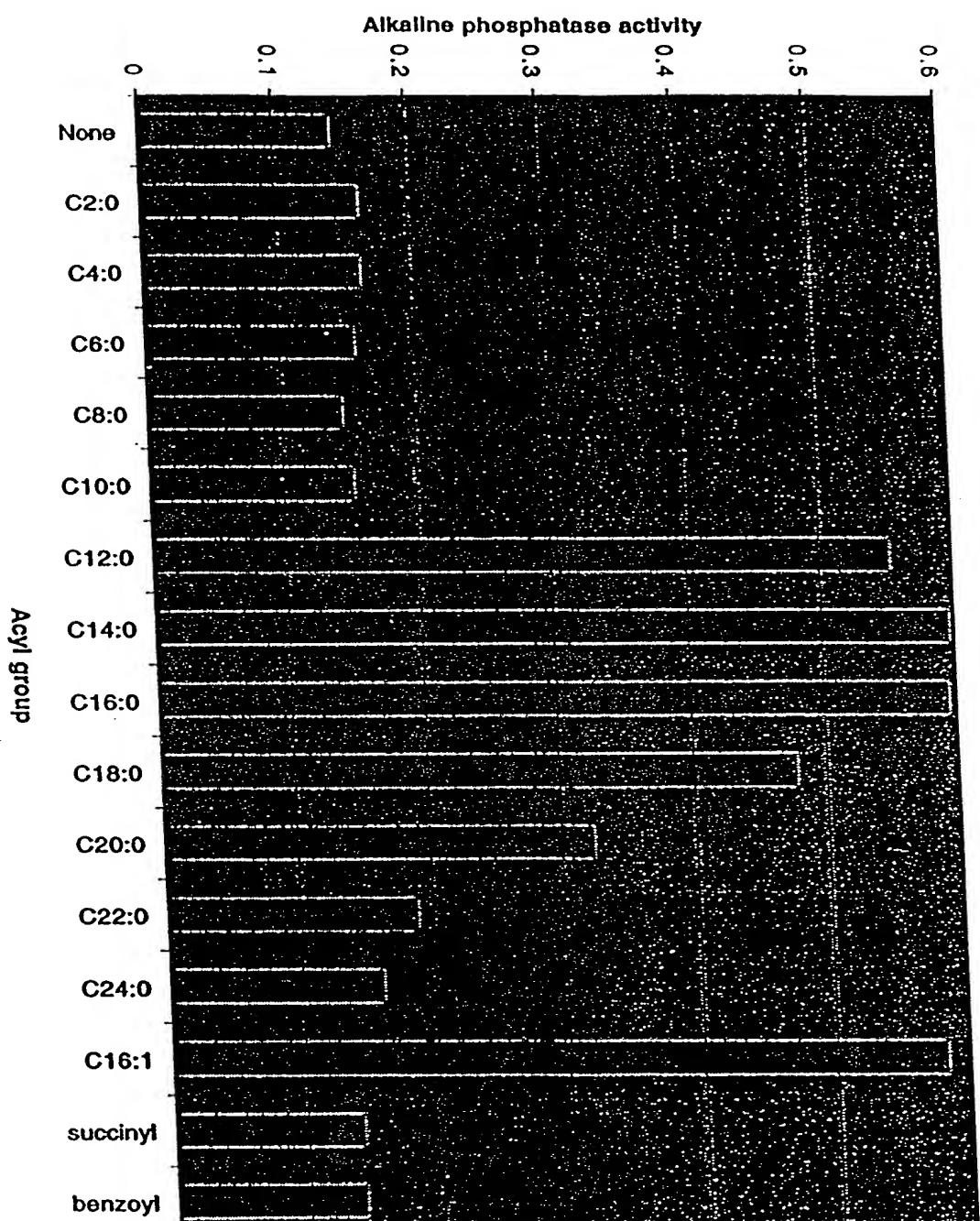
160 EGRAVDITTS DRDR_{x31} KYG_{x32} L ARLAVEAGFD WVYYES_{x33 x34} H_{x35}

176 H_{x36} SVK_{x37 x38 x39} S_{x40} AA_{x41 x42} GG

Where:

X1 is either V or G;
X2 is either V, F or P;
X3 is either G or V;
X4 is either S or G;
X5 is either R or K;
X6 is either P, H or Y;
X7 is either P or A;
X8 is either R or K;
X9 is any amino acid;
X10 is either V or T;
X11 is either A or L;
X12 is either S, I or V;
X13 is either N or G;
X14 is either P or A;
X15 is either Y or A;
X16 is either I or V;
X17 is either A or S;
X18 is either S, N or G;
X19 is either E or D;
X20 is either T or V;
X21 is either T or S;
X22 is either Q or E;
X23 is either D or E;
X24 is either R or K;
X25 is either L or V;
X26 is either S or A;
X27 is either Q or M;
X28 is either S or A;
X29 is either E or Q;
X30 is either E or D;
X31 is either N or S;
X32 is either L or M;
X33 is either K or R;
X34 is either A or N;
X35 is either V or I;
X36 is either C or V;
X37 is either S or A;
X38 is either E or D;
X39 is either H or N;
X40 is either A, V or L;
X41 is either K or R; and
X42 is either T, S or A.

Induction of alkaline phosphatase in 10T1/2 cells by acyl-hedgehog. Effect of acyl chain length.



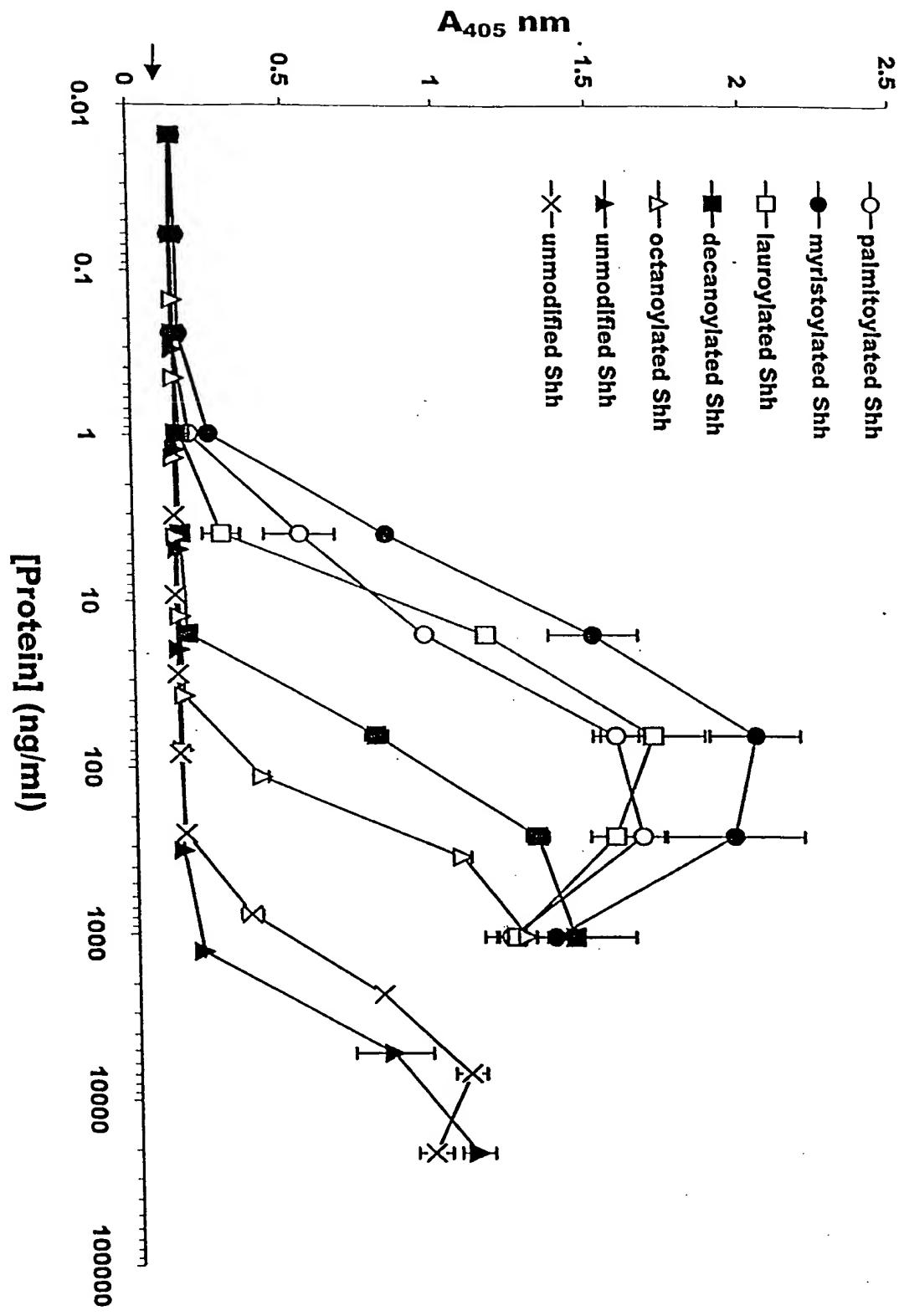


Figure 11

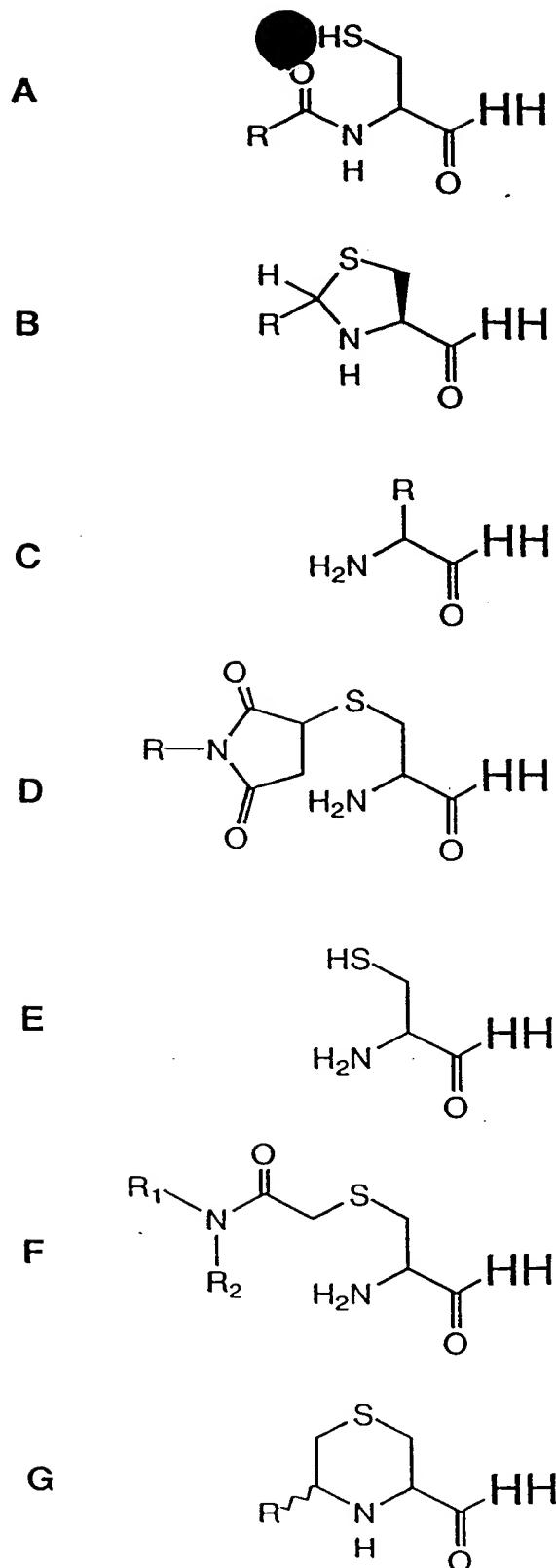


Figure 12

Figure 13. Relative potency of various hydrophobically-modified forms of hedgehog in the C3H10T1/2 assay

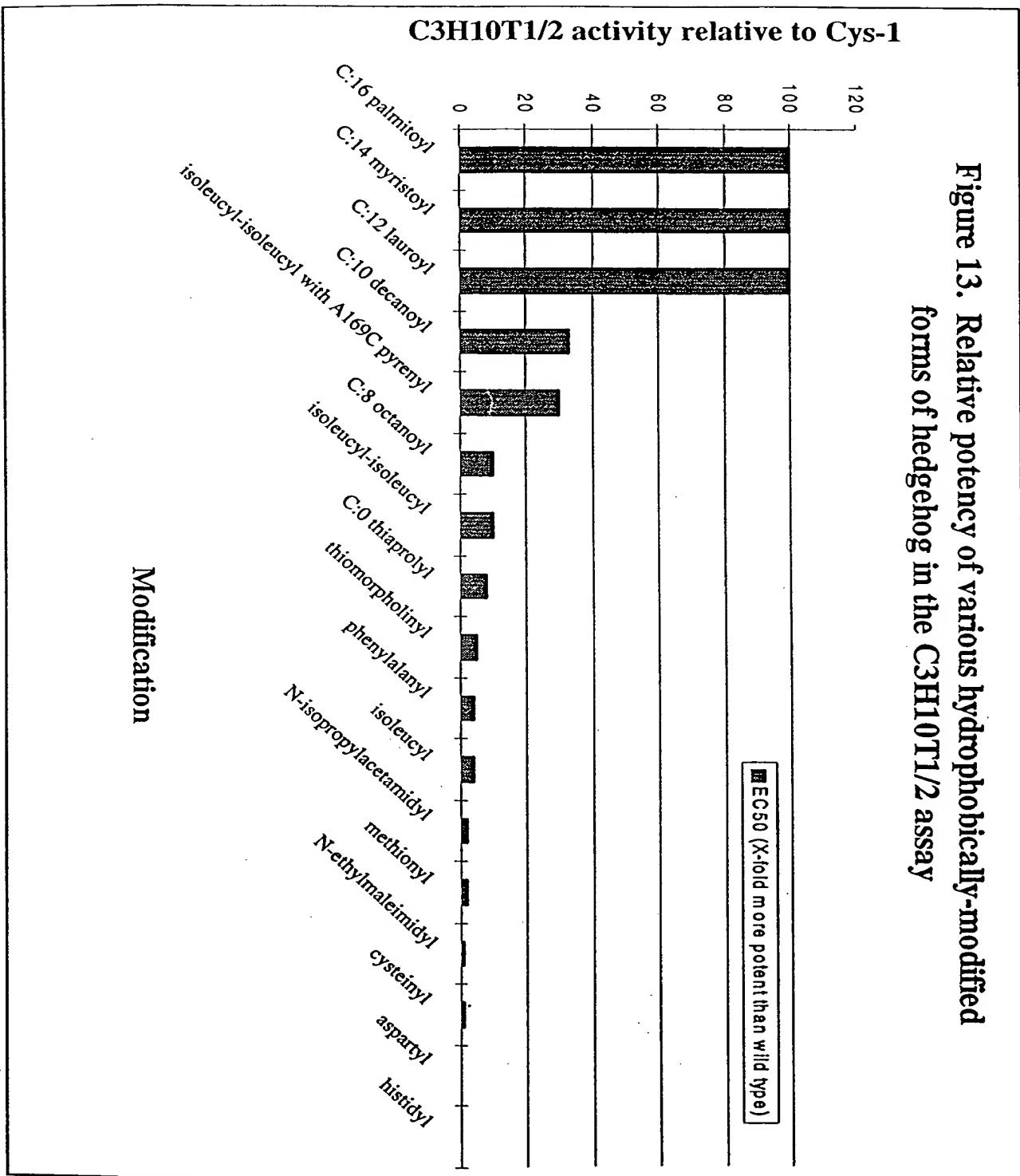
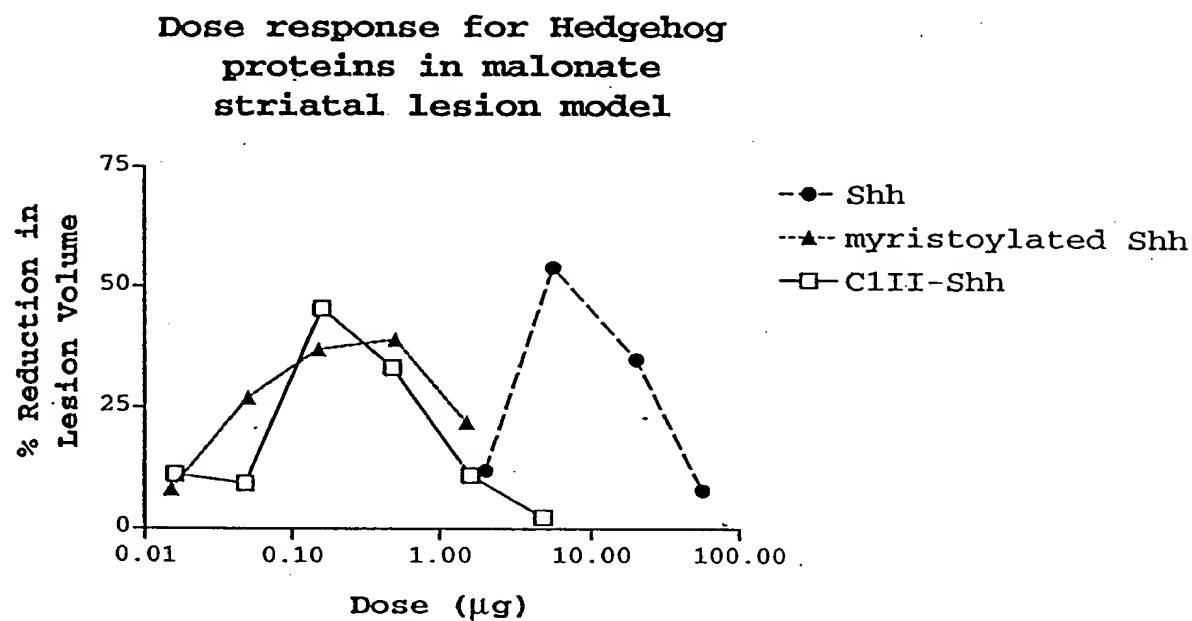


Figure 14



Activities of maleimide modified sHh-N in 10t1/2 cells

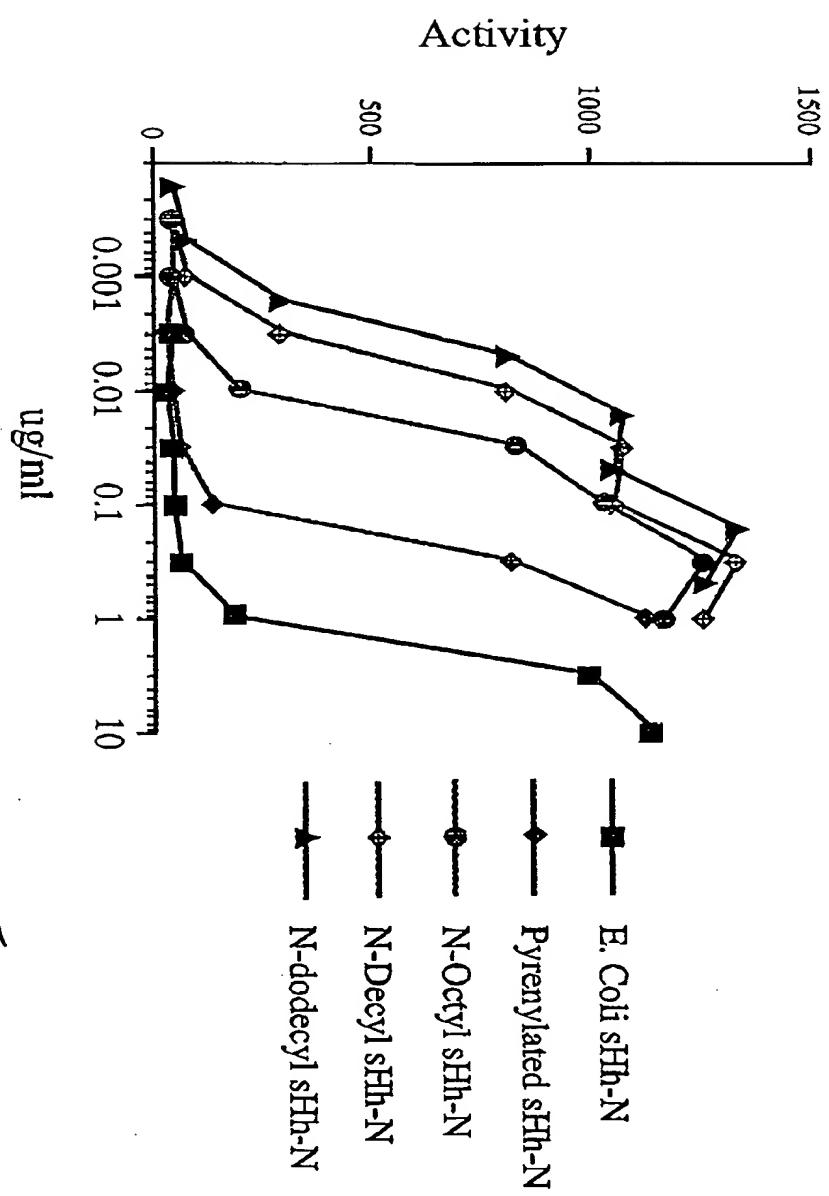


Figure 15